

# NORWOOD PEDESTRIAN PLAN

## PART 4: FUNDING

### Section 13: Sample Cost Estimates for Facilities

In order to build pedestrian facilities, a number of different costs associated with projects must be considered. There are material costs, labor costs, mobilization costs, right-of-way purchase or easement costs, design costs, and project management expenses. Sidewalk and trail projects might also include changes to existing grades and necessitate alterations to drainage structures. Together these items are considered “project costs.” In addition to the project costs, there are also ongoing expenses associated with the new facility, such as maintenance, security, promotion and other programs necessary for the initial and continued success of the facility.

The cost estimates provided below are primarily limited to material and labor. They are provided only as a guide and are approximate. Prices are current for the time of this publication. Materials, labor and other project costs will vary with fluctuating interest rates and inflation.

#### Sidewalks and Trails

##### **Costs Per Mile**

<u>Surface Material</u>	<u>Costs Per Mile</u>	<u>Longevity</u>
Concrete	\$150,000 - 300,000	20 years +
Asphalt	\$ 80,000 - 150,000	7-20 years
Crusher fines	\$ 80,000 -120,000	7-10 years
Wood chips	\$ 65,000 - 85,000	1-3 years
Soil cement	\$ 60,000 -100,000	5-7 years
Native soil	\$ 50,000 - 70,000	variable
Boardwalk	\$1.5 - 2.0 million	7-15 years
Recycled materials	variable	variable

##### **Costs Per Unit**

Conventional Concrete	4 ft. wide path=\$15/LF.
Pervious Concrete	10 ft. wide path=\$45/LF.
Asphalt	10 ft. wide path, 3” thick = \$20/LF.
Crusher fines	4 ft. wide path=\$5/LF.

Installation costs do not include ROW purchase, grading or utility relocation.

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## Total Cost of Resurfacing Trails

Concrete	\$ 25 LF
Asphalt	\$ 10 LF (per linear foot) (\$ 5 LF to overlay w/ top coat)
Crushed Stone	\$ 5 LF

## Typical Annual Maintenance Costs for a 1-Mile Paved Trail

Drainage and storm channel maintenance	\$ 500
Sweeping/blowing debris off trail head	\$ 1,200
Pickup/removal of trash	\$ 1,200
Weed control and vegetation management	\$ 1,000
Mowing of 3-foot grass shoulder along trail	\$ 1,200
Minor repairs to trail furniture/safety features	\$ 500
Maintenance supplies for work crews	\$ 300
Equipment fuel and repairs	\$ 600
<b>TOTAL</b>	<b>\$ 6,500</b>

## Street Improvements

### Crosswalks

Approximate installation costs per unit:

Regular striped	\$ 100
Ladder crosswalk	\$ 300
Patterned concrete	\$3,000
Raised	\$4,000

**4-way pedestrian signals: \$20,000 per unit**

**Striping:** 12-inch: \$1 per linear yard (LY)  
4-inch: \$10 K per mile, or \$2 LF

Costs do not include maintenance, which varies according to materials used.

**Curb extensions:** \$40,000 - 80,000 for four corners

**Concrete curb and gutter:** \$12 - \$15/LF

**Curb inlets** \$2000 per unit

**Speed humps:** \$1,700 per unit

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## General Facilities

**Bike Racks:** \$350-\$750 (10-12 bikes)

**Trees:** \$200/tree, installed

**Lighting:** \$ 45/LF frontage

### **Street Furniture:**

Prices vary greatly according type of facility, brand, and level of customization. Benches installed start at approximately \$600/unit.

**General park facilities** \$ 25/SF

The construction of new park or open space facilities on land not currently used as park, with some furniture and amenities.

## Cost Estimate Sources:

"Trails For The 21st Century," published by Rails-To-Trails Conservancy, 2001:

<http://www.trafficcalming.org/measures2.html>

[http://www.nysphysicalactivity.org/site\\_beactiveenv/nybc/source\\_files/3\\_pedfac\\_improve/FHA\\_EmergTechPedXWalk.pdf](http://www.nysphysicalactivity.org/site_beactiveenv/nybc/source_files/3_pedfac_improve/FHA_EmergTechPedXWalk.pdf)

<http://www.charmeck.org/Departments/Transportation/About+Us/Speed+Humps.htm>

### **National Trails Training Partnership**

<http://www.americantrails.org/resources/trailbuilding/AsphaltCO.html>

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## Section 14: Funding Strategies

Careful planning of pedestrian facilities is half the battle. The other half is building them. Both procedures require funding. However, there are many sources available for funding the planning and construction of pedestrian improvements. Using the right source and getting the best return requires strategy. This Plan itself was funded by the NCDOT Bicycle and Pedestrian Planning Grant. But grants usually provide only a portion of overall funding needs. The most successful strategy for a municipality to develop and improve its pedestrian system will involve an appropriate combination of all possible sources, public and private.

### **Private Funding Sources**

As shown earlier in this Plan, improving the pedestrian quality of Norwood may have more to do with guiding the Town's growth patterns than it has with building individual sidewalks or trails. These patterns of development are guided by the Town's ordinances. If these documents are directing privately funded growth in a coordinated, pedestrian-friendly manner, private development will accomplish many of the Town's pedestrian-friendly goals through private initiative and investment. For examples of how the Town's Subdivision and Zoning Ordinance can accomplish this, refer to the **Recommended Policies and Ordinance Modifications** of this Plan.

Individual ideas by which private investment can help build and maintain public pedestrian improvements are limited only by the imaginations and incentive of those involved. If the Town has a definite vision of what it wants, and promotes that image clearly and positively, it will attract developers that will be more inclined to work with the Town to accomplish mutual goals.

### **Public-private Partnerships**

Due to the linear and connective nature of many pedestrian facilities, oftentimes improvements may involve numerous landowners. Greenway projects, for example, can present complex challenges of working with multiple property owners and jurisdictions. Creating partnerships may be the only way to solve the complex problems that ensue, as well as deal with the inevitable web of utility lines and transportation corridors. Though these partners may have some conflicting interests at times, opportunities for funding, support and publicity may arise and broaden by involving partners with diverse interests.

Multiple uses of utility corridors provide one example of effective partnership. Most utilities use a linear corridor but occupy only a small portion of the ground surface. Rather than being solely dedicated to that one isolated use, these valuable corridors can often include a complementary public transportation and recreation use along with the utility functions. Utilities benefit from sharing corridors with trails through maintenance savings.

Find more information about partnerships through American Trails, at:  
<http://www.americantrails.org/resources/greenways/GrnwyUrbanSHM.html>

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## **Federal Funding Sources**

Certain Federal-aid transportation funding sources may be used for building, or improving accessible pedestrian facilities through rural planning organization (RPO) process. Federal funding sources for bike and pedestrian facilities are available mainly in the form of:

1. Enhancement program, since 1991
2. Safe Routes to Schools program under the new SAFETEA bill.

STP funds may be used only if the new bike/ped facilities are built as parts of a new highway construction project.

## **Transportation Enhancement Program**

Congress created the Transportation Enhancements (TE) program under the Intermodal Surface Transportation Efficiency Act (ISTEA) in 1991 to address growing concerns about air quality, open space, and traffic congestion. This program is the first Federal initiative to focus on enhancing sidewalks, bike lanes, and the conversion of abandoned railroad corridors into trails. The new transportation bill - the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), signed into law in 2005, continued the transportation enhancement activities through a set aside of 10% funding from the surface transportation program (STP).

## **Safe Routes to School**

The SAFETEA-LU bill established a new Safe Routes to School program. This new program receives \$612 million in transportation funds over five years to make it safer for children to walk or bicycle to school. Funding for Safe Routes to School will be distributed to states in proportion to the number of primary and secondary school students in the state, with no state receiving less than \$1 million annually. Communities will be able to use the funds to fix hazards and slow traffic on roads, pathways or trails near schools while increasing safety through focused enforcement and education programs. Each state is being directed to create a position of a Safe Routes to School coordinator, and the bill also provides funds for a national Safe Routes to School clearinghouse.

Eligible projects and activities include: planning, design, and construction of infrastructure-related projects that will substantially improve the ability of students to walk and bicycle to school, on any public road or any bicycle or pedestrian pathway or trail within approximately 2 miles of a primary or middle school; and non-infrastructure-related activities to encourage walking and bicycling to school, including public awareness campaigns and outreach to press and community leaders, traffic education and enforcement, student training, and funding for training, volunteers, and managers of SR2S programs. The Program is designed to assist projects that will result in:

- Increased bicycle, pedestrian, and traffic safety
- More children walking and bicycling to and from schools
- Decreased traffic congestion
- Improved childhood health

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- Reduced childhood obesity
- Encouragement of healthy and active lifestyles
- Improved air quality
- Improved community safety
- Reduced fuel consumption
- Increased community security
- Enhanced community accessibility
- Increased community involvement
- Improved physical environment for increasing the ability to walk and bicycle to and from schools
- Improved partnerships among schools, local municipalities, parents, and other community groups, including non-profit organizations

## Contact:

Sarah O'Brian – interim Safe Routes to School Coordinator  
Bicycle & Pedestrian Division, NCDOT  
401 Oberlin Road, Suite 250  
Raleigh, NC 27601  
Phone: 919-515-8703  
Email: [skworth@ncsu.edu](mailto:skworth@ncsu.edu)  
<http://www.ncdot.org/programs/safeRoutes/>

Accessible pedestrian projects can also be funded through other Federal-aid Highway Programs including Federal Lands Highway Program, National Scenic Byways Program, Recreational Trails Program, Transportation and Community Systems Preservation Pilot Program (TCSP), and Job Access and Reverse Commute Grants. (U.S. Department of Transportation, 1998).

For additional information about Federal programs as well as grant writing assistance, visit the American Trails website at:  
<http://www.americantrails.org/resources/fedfund/index.html>

## USDA Rural Business Enterprise Grants

<http://www.rurdev.usda.gov/rbs/buspr/rbeg.htm>

Public and private nonprofit groups in communities with populations under 50,000 are eligible to apply for grant assistance to help their local small business environment. \$1 million is available for North Carolina on an annual basis may be used for sidewalk and other community facilities. For more information from the local USDA Service Center, see <http://offices.sc.egov.usda.gov/locator/app?service=page/ServiceCenterSummary&stateCode=37&cnty=045>

## Community Development Block Grant Program

<http://www.hud.gov/offices/cpd/communitydevelopment/programs/index.cfm>

The U.S. Department of Housing and Urban Development (HUD) offers financial grants to communities for neighborhood revitalization, economic development, and improvements to community facilities and services, especially in low and moderate-income areas. Several communities have used HUD funds to develop greenways. Grants from this program range

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from \$50,000 to \$200,000 and are either made to municipalities or non-profits. There is no formal application process. Funding targets projects that benefit low- and moderate-income persons, and development projects designed to improve the health or welfare of the community.

## **Wetlands Reserve Program**

<http://www.nrcs.usda.gov/programs/wrp/>

<http://www.ngpc.state.nc.us/wildlife/wrp.html> - informational site

The Department of Agriculture also provides direct payments to private landowners who agree to place sensitive wetlands under permanent easements. This program can be used to fund the protection of open space and greenways within riparian corridors and can therefore assist with trail/greenway funding efforts.

## **Rivers, Trails, and Conservation Assistance Program**

[http://www.ncrc.nps.gov/programs/rtca/ContactUs/cu\\_apply.html](http://www.ncrc.nps.gov/programs/rtca/ContactUs/cu_apply.html)

The National Parks service operates this program aimed at conserving land and water resources for communities. Eligible projects include conservation plans for protecting these resources, trail development, and greenway development.

## **State Funding Sources**

### **North Carolina Department of Transportation**

Projects under \$100,000 involving pedestrian facility improvements and related landscaping can qualify for North Carolina Department of Transportation (NCDOT) funds. Contact the NCDOT Division 12 Division Operations Engineer.

### **FHWA Recreational Trails Program**

The Recreational Trails Program is actually a Federal program administered by the FHWA from the Highway Users Trust Fund dollars derived from Federal fuel tax. But each state receives an annual portion committed to grants for recreational trail projects. For FY 2006 states will share in \$60 million, increasing to \$85 million by FY 2009.

Contact the Recreational Trails Program North Carolina Administrator:

Darrell L McBane,

State Trails Coordinator

NC Division of Parks & Recreation

12700 Bayleaf Church Road

Raleigh NC 27614-9633

phone: 919-846-9995

fax 919-870-6843

email: [darrell.mcbane@ncmail.net](mailto:darrell.mcbane@ncmail.net)

<http://www.ils.unc.edu/parkproject/trails/home.html>

### **Clean Water Management Trust Fund**

North Carolina's Clean Water Management Trust Fund (CWMTF) was established to help local governments, state agencies and conservation non-profit groups finance

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projects that specifically address water pollution problems. Grant monies from CWMTF may be used for a variety of water quality improvement projects, including: Land acquisition for riparian buffers for the purposes of environmental protection of surface waters or urban drinking water supplies and for establishing a network of **greenways** for environmental, educational or recreational uses. For more information, contact Bern Shumack at (336) 366-3801 and visit: <http://www.cwmtf.net/appmain.htm>.

## **The North Carolina Division of Forest Resources**

Urban and Community Forestry Grant can provide funding for a variety of projects that will help toward planning and establishing street trees as well as trees for urban open space. See: [http://www.dfr.state.nc.us/urban/urban\\_ideas.htm](http://www.dfr.state.nc.us/urban/urban_ideas.htm)

## **Other Grant Sources**

### **Robert Wood Johnson Foundation**

The Foundation seeks to help communities become increasingly walkable and thereby promote more active lifestyles that include exercise, like walking or biking, as a part of daily routine, particularly for children. Learn more about available grant opportunities at: <http://www.rwjf.org/applications/independent/overview.jhtml>

## **Local Public Revenue Strategies**

**Facility Maintenance Districts** (FMDs) can be created to pay for the costs of on-going maintenance of public facilities and landscaping within the areas of the Town where improvements have been concentrated and where their benefits most directly benefit business and institutional property owners. An FMD is needed in order to assure a sustainable maintenance program. Fees may be based upon the length of lot frontage along streets where improvements have been installed, or upon other factors such as the size of the parcel. The program supported by the FMD should include regular maintenance of streetscape or off road trail improvements. The Town can initiate public outreach efforts to merchants, Chamber of Commerce and property owners. In these meetings Town staff will discuss the proposed apportionment and allocation methodology and will explore implementation strategies.

The Town can manage maintenance responsibilities either through its own staff or through private contractors. The public and, in particular, those within the FMD, should periodically informed about who to contact in the Town about maintenance issues. The Town should provide a link on the Town Website that clearly refers to reporting maintenance issues.

### **Streetscape Utility Fees**

Streetscape Utility Fees could help support streetscape maintenance of the area between the curb and the property line through a flat monthly fee per residential dwelling unit. Discounts would be available for senior and disabled citizens. Non-residential customers would be charged a per foot fee based on the length of frontage on streetscape improvements. This amount could be capped for non-residential customers with extremely large amounts of street frontage. The revenues raised from Streetscape Utility fees would be



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limited by ordinance to maintenance (or construction and maintenance) activities in support of the streetscape.

## **Local Budget Recommendations**

In order for Norwood to carry out the vision expressed in this Plan, a steady commitment to implementing Plan projects should be maintained. This can be accomplished by coupling the above-mentioned funding opportunities with an annual allotment from the Town's public works budget. The Town may choose to commit a regular percentage of its Capital Improvements Program toward that end, in addition to its Powell Bill allotment for street-related pedestrian projects.

## **Additional funding information sources:**

### **Facility Maintenance Districts**

<http://www.ci.livermore.ca.us/firststreet/streetscape/DowntownLandscapeMaintenanceDistrict.html>

### **Streetscape Utility Fees - City of Salem (Oregon)**

[http://www.cityofsalem.net/~spubwork/press\\_releases/pr\\_s-scape.htm](http://www.cityofsalem.net/~spubwork/press_releases/pr_s-scape.htm)

### **Federal Funding Sources**

<http://www.pagreenways.org/funding-federal.htm>

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## **Section 15: The Plan Adoption and Approval Process**

Upon final approval of the Pedestrian Plan by the Steering Committee and NCDOT's Division of Bicycle and Pedestrian Transportation, the Steering Committee will submit the the Plan to the Town Planning Board for review. At this time the Plan Consultant (Centralina Council of Governments) will also submit the Plan to the Rocky River Rural Planning Organization for endorsement.

The Planning Board will make any recommendations it sees fit and either return the Plan to Steering Committee for revision and resubmittal, or will recommend the Plan to the the Town Board for review.

The Town Board and attorney will review the Plan, and hold a public hearing of the Plan for public comment. The Town Board will then either publicly adopt the Plan, or make other determinations.